Inner front cover: Photo: Left to right: Twice Hero of the Soviet Union, Pilot-Cosmonaut V. F. Bykovskiy; Chairman of the Central Committee, DOSAAF/USSR, Fleet Admiral G. M. Yegorov; DOSAAF Master-Radioconstructor A. Papkov; Master of Sport of the USSR International Class G. Petrochkova; Master of Sport of the USSR N. Kazakova; Master of Sport of the USSR International Class, Meritorious Trainer of the RSFSR A. Koshkin.

Inner front cover: "MULTIPLY THE RANKS OF RADIOSPORTSMEN," by G. Petrochkova /see above/, S. Zelenov, Master of Sport of the USSR, N. Kazakova /see above/, A. Popkov /see above/, A. Koshkin /see above/. Excerpts from statement by those receiving Komsomol /Communist Youth League/ awards. "In our times, special significance attaches to technical forms of sport, including radiosport. This is understandable. Scientific-technical progress has today become one of the most important moving forces in Communist construction, in the solution of tasks put forward by our party for the eleventh five-year plan. ..."

"Let us devote all efforts toward having as many boys and girls as possible take up this necessary, attractive, and useful activity and pass through the wonderful school of amateur radio, ..."

"Our duty is actively to help in the creation of independent clubs and circles in schools, Pioneer Palaces, houses of culture, and enterprises, to sponsor radioamateurs working on the B/aykal/ A/mur/ M/ainline/ /the rail line paralleling the Transsiberian/, those in areas where the riches of Siberia are being opened up, from the Far East, from the North. ..."

"Let every radiosportsman who has attained high sport titles at national championships and at international competitions, at republic and oblast events, prepare his replacement."

"It is our honorable duty to be the tutors, the educators of sportyouth, to struggle for the massiveness of physical culture and sport. Physical culture, as indicated at the XXVIth Congress of the party by L. I. Brezhnev, must enter into the daily life of wide layers of the population, especially children."

pp 1 - 2: "TRUE HELPER OF THE PARTY," by V. Mishin, Secretary, Central Committee, Komsomol.

The XIXth Congress of the All-Union Leninist Communist Youth League is a major event in the organization's history, with the youth of the country of Soviets reporting on their contribution toward the fulfilment of the historic decisions of the XXVIth Congress of the Communist Party of the Soviet Union. ...

Youth's possibilities in scientific-technical progress are most clearly examplified in the "creaton, by the efforts of DOSAAF radioamateurs, and by the student and engineer public, of radioamateur artifical Earth satellites, which were first launched into space in 1978. In December of last year a series of satellites of a new-generation "Radio" type was placed in orbit around Earth; these were created by a creative DOSAAF collective. Student construction bureaus of the M/oscow/ A/viation/ I/nstitute/ and other institutes are continuing to work persistently at creating small pieces of space equipment. It is evident that the time has come to unite the efforts of radioamateurs, students, and young specialists in this promising and attractive area under the aegis of the Komsomol and DOSAAF, to coordinate all their creative plans, and to open the way to space experiments still wider to future constructors, researchers, and radiospecialists."

"We think the ideas of developing a wide network of eaucations earch stations and of carrying out mass Scientific and technical experiments and all-union and international space radiosport contests, are deserving of support. Komsomol and DOSAAF organizations must, it is clear, more widely use the launching of amateur satellites for publicizing the scientific-technical creativity of youth and technical forms of sport."

"The Leninist Komsomol has a special relationship to technical and military-application forms of sport. Already in the thirties a Committee for Assistance to Radiofication and the Development of Amateur Radio operated, attached to the CC of the VLKSM and local Komsomol organizations pertifipcated in opening amateur radiostations... ."

"We do not have the right to remain indifferent to the fact that many tens of thousands of boys and girls, especially in rural areas and small towns, cannot take up marksmanship, motor-, or radiosport. ... ."

The tradition of All-Union Radio Expeditions conducted by the Federation of Radio Sport and Radio magazine should be continued. For this reason the initiative of the radioamateur public of Moscow devoted to the 40th anniversary of the Soviet Army in the Great Fatherland War, is deserving of support.

pp 10 - 13: "OUR RESERVES," by P. Velechko, Deputy Chairman, Executive Committee, Council of Peoples Deputees, Dnepropetrovskaya Oblast'.

The article touches upon several problems affecting amateur radio, based on the example of Dnepropetrovskaya Oblast'. Amateur radio got under way there, as it did in the majority of industrial oblasts, in the second half of the 20's. In the pre-war years it developed quickly in Osoaviakhim /predecessor of DOSAAF - Tr/ organizations, in schools, and in non-school institutions. But the greatest expansion occurred in the postwar years. Already in 1946 a collective station went on the air from the Dnepropetrovsk Oblast' Radioclub, headed for 26 years by Master of Sport V. Shpilevoy, who contributed greatly to the development of radiosport in the oblast'. The Dnepropetrovsk area was one of the first in the country where ultrashortwave amateur communication was developed widely; thanks to the efforts of Masters of Sport of the USSR M. Tishchenko and V. Yurko, and radioamateur-contructor M. Abramovich, a whole network of collective school stations was put into operation. By the fifties and sixties, ten of shortwave and ultrashortwave collective stations were in operation.

While unfortunately no summary data exist, one can confidently assert that many many thousands of people (and in this lies the social significance) were helped to master radiotechnical knowledge, select radioelectronics as their profession, and to become qualified workers, technicians, and engineers. It would be hard to overestimate the role of amateur radio in preparing youth for army service; it's well known that soldier-communicators as a rule find their way into technology through school or student radio circles or sections, being attracted to radiosport or amateur construction.

Today we can rightly speak of amateur radio as a mass avocation of youth. Dnepropetrovskaya Oblast', for example, presently has 575 amateur stations, including 89 for collective use. In DOSAAF organizations, 135 sections are in operation training 11,000 persons, and in addition there are 118 radiosport and 270 radiotechnical circles and groups involving some 6,000 people.

"I wish to note that the possibility made available to beginners to operate in the medium-wave band /160m - Tr./ has made it possible to attract to radiosport a large group of young radiotechnology enthusiasts, which has significantly reduced the number of illegal transmissions."

A brief discription of collective stations now operating in the oblast' -- including UK5EAY in Denpropetrovsk -- illustrates not only the positive experience acquired but also the great possibilities available for attracting youth into amateur radio. But analysis shows that the coverage of youth by amateur radio throughout the oblast' is extremely uneven, being the greatest in the large cities -- Denpropetrovsk, Krivoy Rog, Dneprodzerzhinsk, significantly less in small towns, and worse still in rural areas. This is explained first of all by a lack of qualified personnel to direct collective stations and by a lack of equipment and instructional material.

"Frankly speaking, insufficient attention is still given to military-application sports in general and to radiosport in particular, by Councils of Peoples Deputees. These factors have in recent times begun to put brakes on the further growth in the mass nature of radiosport in the major cities of the oblast'."

"The weak equipping of radiosport with technical gear also takes its toll. Whereas in the sixties and in the first half of the seventies it was possible to equip collective radiostations with what was considered antiquated radioequipment /??? - za schet moral'no ustarevshey ... radioapparatury/, turned over without charge to DOSAAF organizations, at the present time such possibilities have become more limited. The technical re-equipping of communication apparatus has basically ended, and preparation of self-made radioamateur equipment in quantities sufficient for the further noticeable growth of the radioamateu movement is limited on account of the absence of centralized supplying of DOSAAF organizations, young technicians' stations, Houses and Palaces of Pioneers and School Children with radioparts in sufficient variety and quantity. Acquiring necessary radioparts in the trade network, as a rule, does not turn out to be possible. Their assortment is extremely poor. But even what does show up in the stores cannot be acquired, either by DOSAAF organizations or by schools or non-school establishments, since they are not released on a non-cash basis."

Given the importance of raising the mass-nature of the radio amateur movement, the time has come to resolve a series of difficult problems. One of these is preparation of qualified trainers in radiosport, leaders of constructor sections and radio circles in special educational institutions. Often radiocircles and sections of collective stations are housed in inappropriate rooms, and many have no space at all; this despite the colossal increase in construction. The explanation is that in designing new construction, rooms for technical-creation activities are not always foreseen. This situation must be changed.

pp 12 - 13, inner back cover: "THEY'RE GETTING READY FOR THE ANNIVERSARY," by A. Gusev.

The Ivanovskaya Oblast' United Technical School is housed in a specious building constructed only a few years ago and bearing a tablet reading "Built with funds received by DOSAAF organizations from membership dues and DOSAAF lotteries."

Vladimir Michaylovich Skvortsov is chief of the collective radiostation and has been a radioamateur nearly half a century. He completed an Osoaviakhim radio course in the late thirties and during the war was a partisan radioman and was wounded during a Hitlerite attack. After several days alone he made it back to base, severely frozen. Under a local anesthetic they amputated both legs in a partisan hospital. After the war he halped organize a collective station, studied, taught, and was deputy editor of the oblast youth newspaper. He went on pension, but didn't sit home. He became chief of a collective radiostation and has twice been elected Chairman of the Club Council. Asked what new has occurred in recent years, Vladimir Michaylovich replies: "Many things." In two years eight candidate masters of sport have been trained. Over 60 EZ call-signs have been issued, new antennas have been installed and plans are under way to get a new antenna, an ultrashortwave transceiver has been built, and communications are going to be conducted via the "Radio" satellites. By the way, V. M. Skvortsov himself, already in the first days of the flight of the new-generation satellites, carried out several QSO's through them. PHOTO, p 12: V. Skvortsov, chief of UK3UAA, right, keeps track of operation by V. Petrov (left) and V. Blinov. PHOTOS, inner back cover: Upper left: Petr Ivanovich Lobanov, teacher of telegraphy, with students. Upper right: Komsomol member N. Volkova, "fox-hunter." Center, left: Teacher V. Sevastyanov helps students during independent preparation. Center, right: N. Lobatsevich, well-known radioconstructor. At bottom: Outstanding Komsomol members (left to right) A. Orlov, A. Monakhov, V. Novozhilov, S. Artem'yev, and S. Kusharin.

p 24: "MS -ACTIVITY DAYS."

"MS-Activity Days" are scheduled during the most intense showers of the year -- the Perseids -- from 0000 UT 9 August to 2400 15 August. Both radio contacts and observations count. Observations must be on frequencies alloted for communication without prior arrangement (sked); both call-sign and the report given by one must be copied. Each confirmed contact is worth 15 points, each incomplete one 2 points. The same number (2) is given for contacts containing errors in receiving reports and for QSO's not conducted in accordance with the standard procedure for MS contacts. Observers receive 1 point.

Each oblast' in accordance with the R - 100 - O listing gives a multiplier credit of 3 points. Each territory in accordance with the R - 150 - S listing gives 1 point, as do the 1st, 3rd, 4th, 6th, 9th, and Ø USSR call areas of the RSFSR, Amurskaya, Irkutskaya, Kamchatskaya, Novoskbirskaya, Omskaya, Sakhalinskaya, Tomskaya, Tyumanskaya, and Chitinskaya oblasts, and Altayskiy Krasnodarskiy, Primorskiy, and Khabarovskiy krays.

Reports are to include: Date, time (UT) from beginning to end, call-sign, reports transmitted and received, mode of operation and mode of communication (by sked or not), whether communication was completed or not (C or NC), and, for observers, text of the report received. In addition, the report must show the place to be used by the judges' collegium for crediting QSO points and multiplier points. In a covering letter /?/, it is necessary to include demographic data, QTH-locator, achievements on each of the ultrahighfrequency bands, and a statement on observing rules for the MS contacts. The report is to be sent to the editors not later than 25 August 1982. Envelopes must be marked "Dni MS-aktivnosti" /MS Activity Days/ on the outside.

p 24: "INFORMATION."

"The Central Radioclub of the USSR named after E. T. Krenkel' is continuing to distribute, collect on delivery, to DOSAAF organizations and to individual amateurs:

"logs (cost of one copy - 20 kop.) and guides containing principal documents and methodological advise on radiosport (cost of one copy - 50 kop.).

"Orders, written on postcards, are to be sent to the address: 123363, g. Moskva, Volokolamskoye shosse, d. 88, st. 8, TsRK SSSR." /CRC of the USSR, Building 8, 88 Volokolamskoye Shosse, 123363 MOSCOW, USSR/

pp 25 - 26: "CQ - U."

INFO*INFO*INFO, by A. Gusev, UA3-170-461.

"Opening Up the 160m Band." Three years have passed since amateurs were allocated the 160m band. Judging by the competitions for the Radio magazine prize its opening up is going successfully. On it one can meet not only beginners but also aces of the airwaves. Here's what S. Zhemaytis, UA3QGO, who went on 160m in October 1979, reports:

"In the first call area on this band only one oblast' -- UA1P (obl. 114) is not represented. In the second through the fifth, stations are operating from all oblasts. In the sixth area stations are quiet for the time being from UD6C, UD6K, and UF60, and in the seventh from UL6K (obl. 024). In the eighth and zero only UH8B/H/E, UV8V /sic/, UM8M, UI8A/D/I/L/O/U/V and UAØA/B/C/I/H/L/Q/S/V/W/Y were represented. There is little activity from UA9K (obl. 163)."

VHF*UHF*SHF, by S. Bubennikov.

"144 MHz -- EME. /Full text./

As we have written before, complex antenna systems and receivers with high sensitivity are necessary for realizing communications via the Moon. It is necessary, however, to take into account the following factors also. As an example, communications between Europe and America are not possible at all times. The extent /?/ of radiovisibility of the Moon -- even at the minimum distance -- is insufficient. The Moon's location must be such that powerful space radioradiation sources -- first of all the Sun -- do not enter into its directivity pattern. Otherwise it will not prove possible to realize maximum receiver sensitivity and the possibility of establishing EME QSO's will be diminished. This leads to a situation in which "windows" that European ultrashortwavers may use for communications with the USA and Canada occur approximately once a month for 2 to 3 days in passes of 5 to 6 hours.

Last autumn, UA3TCF was the most active. The 17 October "window" enabled him to hear many K/N/W stations and make contacts, on skeds, with W4WD and W7HAH, and, without a sked, with KI7D. The next day he worked WAØLPK/KL7 from Alaska. The next "window" of 14 and 15 November brought him contacts with WB8PAT, WB7DTI, and N7NW, and in addition he heard CQ's from several K/N/W's, VE's, OH's, SM's and DK's.

During this period, UA3LBO had two contacts with VE7BQH and VE2DFO. It is interesting that he conducted experiments involving measurements of the level of moon signals, as did UA3LAW. Thus, the signal of the most "powerful" EME enthusiast reached, in a band/width/ of 50 Hz, 25 dB above the noise level!

UA1ZCL opened his account of EME - QSO's with a contact with K1WHS. UG6AD also made his debut; he worked VE7BQH. On 6 December, UA1ZCL had a second EME contact, this time with OH7PI.

UB5JIN, with assistance from UB5JFR and UB5JMR, erected a new F9FT antenna of 8 x 9 elements /next sentence questionable - Tr./ Its span is 6.6 x 2.6 m, the width of the main lobe of its gain is 20 to 21 dB, and its SWR is 1.2. The result was not slow in showing up. On 6 December the first EME-QSO within the USSR took place between UB5JIN and UA3TCF. For about 45 minutes the partners literally "fished out" signals one from the other, but the necessary exchanges of information nevertheless took place. That day both operators heard a rare station -- VK5MC, the lone representative of the Australian continent for EME contacts. For communication he uses an antenna with gigantic (by amateur standards) measurements -- a horizontal rhombic 20 by 200 meters! Obviously, such an antenna can't rotate, so favorable conditions for communication with him only appear for UA3TCF and UB5JIN not more than twice a month for around 20 minutes.

The regular "window" to the USA of 12 and 12 December enabled EME stations to log one more Soviet call. UD6DFD worked K1WHS. He used a 2 x 13-element antenna of the F9FT type and a converter with a noise factor of 11 kT_o. UA3TCF added to his count of moon contacts. He worked WA4LYS, WD5CRK, KB8RQ, and VE7SL. UG6AD had his second EME contact with K1MNS.

"Chronicle."

According to "DUBUS" No. 3/1981, the European leader on 144 MHz was SM7AED with 408 QTH locator squares. The leading Soviet station was UA3LBO (who was in the top ten) with 316. UR2RQT, UC2AAB, UR2EQ, and RA3YCR had more than 250. UQ2GFZ, UB5JIN, UA1MC, UR2GZ, and UA3LAW had more than 200. On 430 MHz, DL7YC was first among the Europeans with 150 squares and UA3LBO first among Soviet stations, with 94. UR2HD, UP2BBC, UR2EQ, and UA1MC had more than 50. On 1215 GHz PAØEZ led with 59 squares; UR2EQ had 20. The best results on 5.6 GHz and 10 GHz were achieved by DL7QY and I6ZAU, with 4 and 14 squares respectively.

Beginning last year, the operators at UK5ECZ in Krivoy Rog began experimenting with the 10 GHz band. A receiver with a D405 diode mixer, a transmitter with a power of 5 mW, and a parabolic antenna with a diameter of 760 mm and a gain of 36 dB have been prepared. Initially, it has been possible to cover a distance of 8 km, the 42 km. The experiments are continuing.

UA9CKW advises that beacon UA9C began operating in Sverdlovsk Oblast' 5 January, on 144191.5 and 432573 kHz, transmitting its call-sign and QTH locator DQ10. The power on 144 MHz is 3 watts and on 432 MHz 1.5 Watts. The antenna is a two-story crossed dipole with circular propagation.1 Its signal is heard well, particularly in Sverdlovsk (52 km).

p 58: Two-element SW Antenna." Description, illustration, and measurements of variation of double Delta Loop, from Ham Radio, May 1981.

p 61: "'Butterfly' Antenna." Ditto, from same issue of Ham Radio.